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A new species of *Trotteria* Kieffer (Cécidomyiidae)  
reared from unopened flower-buds of Privet  
(*Ligustrum vulgare* L.)

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Owing to the kindness of Mr. S. A. Manning, who by sending me in August 1952 some unopened flower-buds of Privet from Norfolk provided the material from which I reared the *Trotteria* species to be described below, I am now able to clear up a problem that for some years has puzzled collectors of such galls.

Many years ago Bagnall & Harrison (1917) recorded that one of them (R.S.B.) had found at Warkworth, Northumberland, the flowers of Privet remaining closed, leathery, and each containing a solitary, rather large, 'orange-yellow' larva. They stated that this was not *Placochela* (*Schizomyia*) *ligustri* (Rübsaamen). The larvae of this latter species also live in slightly swollen and unopened flower-buds of Privet but they are stated, for example by Houard, to be gregarious and very bright ('clair') yellow in colour. Bagnall & Harrison (1918) later reported finding this latter species at Hemlington and Hesleden Dene in Durham and also at Bath.

A few years later Dallman (1925) found solitary 'apricot-coloured' larvae in swollen flower-buds of indigenous Privet near Abergele and at Llanddulas in Denbighshire and on cultivated Privet near Storeton in Cheshire. Owing to the fact that he always found solitary larvae in the galls and because of their colour, Dallman was uncertain whether they were *P. (S.) ligustri* or not. But he reared three females in May 1925 and submitted them to me for my opinion. They (Cecid. 122-4) were in fact *P. (S.) ligustri* (Rübsaamen).

In July the same year I found 'orange' solitary larvae in closed Privet flowers at Nenzig, Austria, and at Mühlehorn, Switzerland. In August I collected similar galls at Olantigh, near Wye, Kent. Some of the flower-buds contained several larvae, others contained only one larva. The gregarious ones were mostly 'orange' and bore on the anal segment two up-turned hooks typical of *Schizomyia* larvae. But among the 'orange' larvae there were also what I termed 'pink' ones that bore no anal hooks. The breast-bone or sternal spatula on both were bidentate. The solitary larvae were either 'orange' or 'pink'. The following year (1926) I collected more galls and larvae at Crundale, near Wye, but once again was not successful in rearing any midges.

When I wrote (1949) that I had come to the conclusion that the 'orange' solitary larvae were those of an undescribed species of the genus *Trotteria* which lives as an inquiline in the galls of *P. ligustri*, I had overlooked my old notes in which I had remarked upon the 'pink' larvae without anal hooks and foolishly not realised that the number of larvae found in a single flower-bud might depend to some extent on whether or not they had started to descend to the soil for the winter. I should have written that the 'pink' larvae probably were an undescribed *Trotteria* species, pointing out that the presence or absence of anal hooks was of much more use in diagnosis than either such colour descriptions as 'apricot-coloured', 'orange', 'very bright yellow' and 'pink' or whether the larvae were solitary or gregarious.

Having reared the *Trotteria* species, it can now be definitely stated that the larvae with anal hooks (Cecid. 997-8) are those of *Placochela* (*Schizomyia*) *ligustri* (Rübsaamen), while those without the anal hooks (Cecid. 999 and 9813) are those of *Trotteria ligustri* sp. n. that is described below. As to colour, those of *P. ligustri* may be described as bright yellow-orange and those of *T. ligustri* as orange-pink; but colour terms being notoriously unsatisfactory they should only be used as rough indications. There is the possibility of an *Asphondylia* species, yet to be discovered, causing unopened flower-buds of Privet. The larva of such an *Asphondylia* would be yellow-orange in colour and would have a quadridentate breast-bone but no anal hooks. It would probably be solitary.

*Trotteria ligustri* sp. n.

*Male*.—Length 2 mm. Antennae: 2+13+big (=2+15), 2+14+big (=2+16), 2+17; the scape segment elongated, about three times as long as broad; flagellar segments as in *Lasioptera*, sessile, lozenge-shaped, terminal segment incompletely separated in Cecid. 8744 and 8746. Eyes confined to lower half of head, widely separated dorsally but connected by a band of pigment, dorsal half of head with broad scales and hairs. Palpi: four segments, proximal quadrate; second slightly swollen about twice as long as broad; third slightly narrower about the same length; fourth and terminal segment narrower and about twice as long; all with setae and scales. Thorax and abdomen dark brown, dorsal parts covered with scales and hairs, scales on distal abdominal segment long and projecting over genitalia. Wings: surface thickly clothed with short hairs; costa, subcosta and 3rd vein thickly covered with scales; 3rd vein clearly separated from subcosta, curved, reaching margin at about two-thirds length of wing; 5th and 6th veins free. Legs: thickly clothed with hairs and scales, posterior femora swollen, long hairs at distal extremity of tibiae, and to a less extent the metatarsal and tarsal segments, giving a slight impression of spurs; claws bifid, moderately curved, slightly longer than empodium. Genitalia: basal clasp segment long, narrow, with long setae; distal clasp segment slightly swollen basally, ending in a narrow beak-like point, heavily chitinised dorsally, with a few short setae ventrally; upper lamella deeply bilobed, each lobe broad, slightly constricted distally; lower lamella about as long, only slightly emarginate; harpes well developed, about one-third again as long as lamellae and reaching to distal end of basal clasp segment; style as long as harpes.

Type: Cecid. 8746.

Paratypes: Cecid. 8744 and 8745.

*Habitat*.—Larvae in unopened flower-buds of Privet (*Ligustrum vulgare* L.), sometimes in company with larvae of *Placochela ligustri* (Rübsaamen). The galls were collected on 12th August 1952 and the three males emerged on 16th June, 19th June and 18th July 1953.

*Type Locality*.—Drayton, E. Norfolk.

When alive *T. ligustri*, as is the case with other species of this genus, is peculiar in appearance since its wings, instead of being folded flat, are heavily creased over the abdomen and so appear very narrow. Fur-

thermore its hind legs are held up in the air with the tarsal segments curved upwards.

No larvae were extracted from the galls from which the above three males were reared, but the following is an abbreviated description of one of the 'pink' larvae (Cecid. 999) found in 1925 at Olantigh, near Wye, Kent, and of a 'pale orange' solitary larva (Cecid. 9813) found in Bluebell Road, Norwich, by Mr. S. A. Manning, 9.9.54.

*Larva*.—Surface covered with scales. Well-developed bilobed breast-bone, pointed lobes widely separated. Anal segment with four long setae. Head-capsule rather heavily chitinised for a normal phytophagous larva, reminiscent of *Mycodiplosis*, and antennae similarly rather pointed.

Cecid. 999 and 9813.

It has not yet been possible to ascertain exactly how the larvae of *Trotteria* species maintain themselves. They could be predators or inquilines, either obligatory or occasional, or even gall-formers. This last alternative is considered unlikely. The fact remains however that practically all the species of this Lasiopterine genus that have been reared have either been definitely associated with various species of four very closely allied genera of gall midges, viz. *Asphondylia*, *Schizomyia*, *Kiefferia* and *Placochela*, or have been reared from a gall very similar to, if not identical with, one made by one of these species. Thus the type of the genus, *T. sarothamni* (Kieffer), occurs in the swollen pods of *Cytisus scoparius* (Common Broom), so does *Asphondylia mayeri* Liebel. *T. galii* Rübsaamen is found in swollen blossom buds of various *Galium* (Bedstraw) species, so is *Schizomyia galiorum* Kieffer. *T. umbelliferarum* Kieffer and *T. inquilina* Rübsaamen have been definitely associated with *Kiefferia pimpinellae* (F. Loew) in the swollen fruits of several Umbellifers. *T. sarothamni*, *T. galii* and *T. umbelliferarum* have been recorded from England. Other European species, in addition to the above, are *T. lathyri* Rübsaamen that was found in swollen pods of *Lathyrus pratensis* (Meadow Vetchling) just as was *Asphondylia lathyri* Rübsaamen; and *T. dalmatica* Rübsaamen (= ? *T. coronillae* Kieffer), both of which were reported from axillary galls very similar to those of *Asphondylia coronillae* (Vallot) on *Coronilla* species. The only African species of *Trotteria* known, *T. sesami* Barnes, was reared from proliferated blossom and capsules of *Sesamum angustifolium* in company with *Schizomyia sesami* Barnes in Tanganyika Territory. The only bred American species of *Trotteria*, *T. solidaginis* Felt, was reared in association with *Asphondylia thalictri* Felt and, according to Felt, is probably zoophagous. Rübsaamen also suggested that the larvae of *Trotteria* species were predaceous. This possible mode of feeding is supported by the somewhat predatory type of larval head-capsule.

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